

REMARKS

This application pertains to a novel separation module.

Claims 2, 4-11, 13-16 and 18-28 are pending, although claims 18-25 and 28 have been withdrawn from consideration as drawn to non-elected subject matter.

Applicants respectfully request that the non-elected subject matter be rejoined with the elected subject-matter upon allowance of elected subject-matter.

Applicants' claims have been amended to recite that the ceramic capillaries are **sintered** ceramic capillaries. Support can be found in the published application at paragraphs [0064], [0066], [0068] and in original claims 18, 19, 20 and 22. No new matter is added.

Claims 4-5, 8-11 and 26-27 stand rejected under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera (US 4,640,774)

Applicants have previously pointed out that Kalthod, in his manufacturing process, winds his hollow fibers on bobbins (col. 4, lines 57-58), and also draws the fibers onto a mandrel as the mandrel is rotated (col. 5, lines 9-10).

Applicants also have pointed out that the McGinnis reference requires the filaments to be kept under a certain elongation tension by means of brake (66a) and guide (70) to ensure winding without wrapping of the filaments (see col. 13, lines 1-30 and Fig. 4). Same applies to the Kalthod reference, which requires using a “mandrel and pulley guides” to keep the fibers under “tension” (col. 5, lines 6-10 of the Kalthod reference).

The Examiner specifically acknowledges on Page 8 of the Office Action of November 19, 2009 that Kalthod teaches "...where the fiber is drawn onto a mandrel as it is rotated." The Examiner also acknowledges, at page 9 of the office action that "McGinnis teaches a conventional winding machine for the fabrication of capillary bundles...".

Applicants explained that these methods would cause ceramic filaments to break.

Least there be any doubt about the ability of ceramic capillaries to withstand the winding that takes place in the references, Applicants have amended their claims to more specifically recite sintered ceramic capillaries. There can be no doubt that such sintered ceramic capillaries would break if treated the way Kalthod and McGinnis treat them.

In the face of Applicants' having pointed out that the winding of the Kalthod and McGinnis references would break ceramic (and certainly sintered ceramic) capillaries, the Examiner simply states that "It would be obvious to one of ordinary skill in the art to use the method of McGinnis to form the plurality of ceramic capillaries with no immediate breakage of the ceramic capillaries. (Office Action of November 19, 2009, page 9).

Nowhere, however, does the Examiner ever explain how it would be possible to carry out the winding of the Kalthod & McGinnis references with ceramic, let alone sintered ceramic, capillaries without breaking them.

The Examiner does, however, point out that Applicants are claiming an apparatus and that it is the structural limitations of the apparatus which are considered in determining the patentability of the apparatus itself, and not the process of making the bundle. While this is certainly true, the Examiner must recognize that the process by which the apparatus of the cited references is made provides evidence of the kinds of materials that it is made of, i.e., evidence of the structural limitations. The apparatus of the Kalthod and McGinnis references must be made of capillaries which are capable of being bent e.g. around a mandrel, and therefore cannot possibly be ceramic and certainly not sintered ceramic capillaries.

There is nothing that could be learned from the Kalthod & McGinnis references cited that would lead those skilled in the art to an apparatus having the structural

limitations of Applicants' apparatus.

The Examiner relies on Garcera for a tape of ceramic paste. Applicants have already pointed out that the Garcera reference teaches the use of tapes of ceramic paste; however these are employed for the connection of the filter members with the gasket (see col. 7, lines 13-17) and not for interconnecting the filter members as to Applicants invention. Particularly these tapes of ceramic paste can not act as baffle plates, as they are situated inside the gasket (9) (see Fig. 6). Moreover, no ceramic paste could overcome the differences between Applicants' novel separation module and anything that could be earned from the Kalthod/ McGinnis combination of references.

No person reading the Kalthod/ McGinnis/ Garcera combination of references could therefore ever be led to Applicants' novel separation module, comprising sintered ceramic capillaries. The rejection of claims 4-5, 8-11 and 26-27 under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera (US 4,640,774) should therefore be withdrawn.

Claims 2, 6, 7 and 12 stand rejected under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera US 4,640,774 as applied to claim 5 above and further in view of Taekwondo US 4,671,809.

The differences between Applicants' claims and anything that can be derived from the Kalthod/McGinnis/Garcera combination of references have been discussed above. The Examiner relies on Taketomo for distances less than 3 mm and an end plate. No defined distances or end plates could possibly overcome the differences pointed out above between the module defined by Applicants' claims and anything that could be derived from the Kalthod/McGinnis/Garcera combination of references.

The rejection of claims 2, 6, 7 and 12 under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera US 4,640,774 as applied to claim 5 above and further in view of Taketomo US 4,671,809 should therefore now be withdrawn.

Claims 13 and 14 stand rejected under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera US 4,640,774 as applied to claim 27 above and further in view of Shay US 4,310,607.

The differences between Applicants' claims and anything that can be derived from the Kalthod/McGinnis/Garcera combination of references have been discussed above.

The Examiner relies on Shay for stainless steel housing. No stainless steel housing could possibly overcome the differences pointed out between the module defined by Applicants claims and anything that could be derived from the Kalthod/McGinnis/Garcera combination of references.

The rejection of claims 13 and 14 under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera US 4,640,774 as applied to claim 27 above and further in view of Shay US 4,310,607 should therefore now be withdrawn.

Claim 15 stands rejected under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera US 4,640,774 as applied to claim 27 above and further in view of Bellhouse US 6,217,764.

The differences between Applicants' claims and anything that can be derived from the Kalthod/McGinnis/Garcera combination of references have been discussed above.

The Examiner relies on Bellhouse for a ceramic housing. No ceramic housing could possibly overcome the differences pointed out above between the module defined by Applicants claims and anything that could be derived from the Kalthod/McGinnis/Garcera combination of references.

The rejection of claim 15 under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera US 4,640,774 as applied to claim 27 above and further in view of Bellhouse US 6,217,764 should therefore now be withdrawn.

Claim 16 stands rejected under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera US 4,640,774 as applied to claim 27 above and further in view of Dobo US 4,268,278.

The differences between Applicants' claims and anything that can be derived from the Kalthod/McGinnis/Garcia combination of references have been discussed above.

The Examiner relies on Dobo for a separation module comprising a catalyst. The inclusion of a catalyst in the device of the Kalthod/McGinnis/Garcera combination of references could not possibly overcome the differences pointed out above between the module defined by Applicants claims and anything that could be derived from the Kalthod/McGinnis/Garcera combination of references.

The rejection of claim 16 under 35 U.S.C. 103(a) as obvious over Kalthod US 5,779,897 in view of McGinnis US 3,690,465 and further in view of Garcera US 4,640,774 as applied to claim 27 above and further in view of Dobo US 4,268,278 should therefore now be withdrawn.

Finally, Applicants note that on page 2 of the office action the Examiner indicates that:

1. The rejection of claims 4, 5, 8-11 and 26-27 as unpatentable over the Kathold/McGinnis/Prasad references has been maintained. However, in the last office

action this rejection was indicated as being "modified" and no detailed discussion of the rejection as modified was provided. Applicants assumed that this rejection was withdrawn. Since not discussed in the earlier office action, it is not understood how it could be "maintained" now. Clarification is respectfully requested.

2. Page 2 also indicates that the rejection of claims 2, 6-7 and 12 as unpatentable over the Kathold/McGinnis/Prasad/Taketomo combination of references has been maintained, but in the last office action this rejection was indicated as being "modified" and no detailed discussion of the rejection as modified was provided. Applicants assumed that this rejection was withdrawn. Since not discussed in the earlier office action, it is not understood how it could be "maintained" now. Clarification is respectfully requested.

3. Page 2 also indicates that the rejection of claims 13 and 14 as unpatentable over the Kathold/McGinnis/Prasad/Shay combination of references has been maintained. In the last office action this rejection was indicated as being "modified" and no detailed discussion of the rejection as modified was provided. Applicants assumed that this rejection was withdrawn. Since not discussed in the earlier office action, it is not understood how it could be "maintained" now. Clarification is respectfully requested.

4. Page 2 also indicates that the rejection of claim 15 as unpatentable over the Kathold/McGinnis/Prasad/Bellhouse combination of references has been maintained. In the last office action this rejection was indicated as being "modified" and

no detailed discussion of the rejection as modified was provided. Applicants assumed that this rejection was withdrawn. Since not discussed in the earlier office action, it is not understood how it could be "maintained" now. Clarification is respectfully requested.

5. Page 2 also indicates that the rejection of claim 16 as unpatentable over the Kathold/McGinnis/Prasad/Dobo combination of references has been maintained. In the last office action this rejection was indicated as being "modified" and no detailed discussion of the rejection as modified was provided. Applicants assumed that this rejection was withdrawn. Since not discussed in the earlier office action, it is not understood how it could be "maintained" now. Clarification is respectfully requested.

In view of the present amendments and remarks it is believed that claims 2, 4-11, 13-16 and 18-28 are now in condition for allowance. Reconsideration of said claims by the Examiner is respectfully requested and the allowance thereof is courteously solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this amendment is required, applicants request that this be considered a petition therefore. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fee or credit any excess to Deposit

Account No. 14-1263.

Respectfully submitted,

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